

**Studies of the Efficacy and Cost-effectiveness  
of  
Social Work Services in Aging  
ANNOTATED BIBLIOGRAPHY**

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## I. LITERATURE REVIEWS/META-ANALYSES

### A. Social Work Interventions

**A1.** Auslander, W. (2000). "Outcomes of social work intervention in health care settings." *Social Work in Health Care*, 31(2): 31 - 46.

This article reports the results of a literature review of studies focused on the outcomes of social work interventions in health care settings. The main purpose of the literature review was to assess the current state of outcome research in this area of social work practice. The author surveyed articles published in the 1996 and 1997 regular issues of *Health & Social Work*, *Social Work in Health Care*, *Journal of Psychosocial Oncology*, *Social Work Research*, *Journal of Social Services Research*, and *Research on Social Work Practice*. In order to account for the academic bias, the author also surveyed the presented literature. These abstracts (N = 378) focused on outcomes of social work practice in the health field that were presented at the 2nd International Conference on Social Work Health and Mental Health held in Melbourne, Australia in 1998. The outcomes that were measured in the studies fell into three broad categories: (1) departmental (i.e., discharge plans) and psychosocial (i.e., adjustment to chronic illness; (2) maintenance outcomes (i.e., length of stay, health care utilization & costs); (3) enabling outcomes (i.e., adherence to medical treatment); and, (4) the relationship between social work interventions and patients' health outcomes. The inappropriate selection of standardized measures and the use of simplistic measures to evaluate outcomes were identified as problematic in the studies reviewed. In regards to published literature, there were no articles published focused on social work outcomes in the health field in 1996. In 1997, several articles appeared in *Research on Social Work Practice* that reported outcomes for interventions in health care. In the presented literature reviewed, one in eight (12%) of the reports dealt with the effectiveness of any type of social work practice. Generally, few studies described the interventions in detail that allowed for replication. Many case studies were presented without reports of the effectiveness of the interventions included. Although not focused on cost outcomes, the author states that the current research does not link maintenance outcomes well with psychosocial outcomes. In other words, the link with health care costs is not made, even though it is an important component in evaluating social work interventions in health care where administrators and payers are focused on the bottom line.

**A2.** Cheetham, J. (1992). "Evaluating social work effectiveness." *Research on Social Work Practice*, 2(3): 265 - 285.

This article is a position paper about the importance of the effectiveness of social work interventions. In fact, it is a call for the rigorous evaluation of social work interventions. The author clearly states that this is the best way to bridge the gap between practice and research--the development and implementation of evidence-based practice. Using her research center as an example, the author discusses the rigorous evaluation of social work practice and the outcomes that should not be overlooked when conducting these evaluations. The article includes a section about the importance of reporting costs and the cost-effectiveness of social work interventions. The author reports that she links cost analyses of the interventions that are implemented in her center with the analyses of the efficacy of the interventions. The author cautions against reporting costs without reporting their link to effectiveness because the impact of the value added as a result of the

interventions may be lost if they are not cost-effective. She highlights the importance of utilizing economists and accountants as collaborators in this work. This article presents a convincing argument for the importance of examining costs in studies of the efficacy of social work interventions.

**A3.** Gorey, K. (1996). "Effectiveness of social work intervention research: Internal versus external evaluations." *Social Work Research*, 20(2): 119 - 129.

Although cost-effectiveness and cost outcomes are not discussed in this article, it provides us with an excellent example of the ways we can measure the effectiveness of social work practice in a manner that would be convincing to policy makers and funding bodies. This article reports the findings of a meta-analysis of studies that evaluate the effectiveness of social work interventions. The findings of this meta-analysis were compared with the social work researchers' self-assessment of their practice experience and outside evaluators' assessments of the interventions. Thirteen journals met the criteria set forth by the researcher for inclusion in the literature search. These included: *Australian Social Work*, *British Journal of Social Work*, *Canadian Social Work Review*, *Health & Social Work*, *Journal of Social Work Education*, *Social Work*, *Social Work in Education*, *Social Work Research*, *The Gerontologist*, and the *Journal of Family Issues*. Of the 279 studies identified, 88 independent studies of the effectiveness of social work interventions with findings published from 1990 to 1994 met the inclusion criteria for this meta-analysis. To determine the effectiveness of the interventions in each study, the effect size (Pearson's correlation coefficient) was calculated for each study. The author also measured the social work researchers' self assessment of the intervention (internal evaluation) for clients with an outside evaluators' assessment (external evaluation) of the interventions for each client. The results of the effect size calculations suggest that more than three-fourths of the clients who participate in social work interventions do better than those who do not participate. However, social worker researchers tend to evaluate their own work more positively than outside evaluators. For this reason, outside evaluations of social work practice are recommended. This is an important recommendation to keep in mind when considering the inclusion of cost measures in evaluations of social work practice because rigorous evaluations of the value added by social work interventions (i.e., improved health, better quality of life) may convince funding bodies and policy makers that social work interventions should be reimbursed even when they are not cost-effective in the short run.

**A4.** Gremier, A. and K. Gorey (1998). "The effectiveness of social work with older people and their families: A meta-analysis of conference proceedings." *Social Work Research*, 22(1): 60 - 65.

In this article, the authors report the findings of a meta-analysis of 42 conference proceedings from volumes 30 (1990) to 36 (1996) of *The Gerontologist*. Each reported findings of the effectiveness of gerontological social work interventions. In each study abstract, effect size was calculable (necessary for inclusion in the meta-analysis). Biomedical interventions were excluded. All other individual, family, program, small group and community social work interventions were included. The effect size (r index) also known as the Pearson's correlation coefficient was calculated for each intervention to determine its effectiveness. Almost three-fourths (69%) of older clients and their caregivers receiving social work interventions do better than their counterparts who are not participating in social work interventions. Although cost outcomes were not measured, some conference proceedings listed for Toseland and colleagues are from studies measuring cost

outcomes. The results of these studies are presently being analyzed. The overall findings of this article closely replicate that of a recent meta-analysis of the published research on the effectiveness of social work that is also included in this annotated bibliography (see **I, A3**).

**A5.** Reid, W., A. Fortune, et al. (2002). "Empirical basis of clinical social work practice: A review of controlled experiments. 6th Annual Meeting of the Society for Social Work Research, San Diego, CA.

This paper presented the results of a review of empirically tested social work programs published between 1990 and the fall of 2001. The paper builds on and extends an earlier review of such interventions (see **I, A6**). The review has two purposes: 1) to provide a description of the development and testing of social work interventions and 2) to contribute to the identification of the foundation for evidence based social work practice. The authors reviewed 151 empirically tested (controlled experiments) social work interventions. For inclusion in the review, the interventions tested needed to involve direct practice with client systems (individuals, families, groups) or their caregivers. (individuals & families, groups). The authors coded the studies for program level characteristics including length of intervention, practitioner type, modality, intervention approach, and replicability as well as client outcomes including intervention versus control outcomes at program completion, comparison with client outcomes of similar programs at completion, and follow-up. Overall, 88 percent of the programs were found to have one or more positive outcomes. Furthermore, 83 percent of studies with positive results were reproducible, meaning that enough information was available regarding the intervention that it could be replicated. This study specifically identified social work interventions in aging. The authors identified 10 programs (5%) in the sample that were specifically designed for use with the elderly. Although cost outcomes were not specifically addressed, several of the programs by Toseland and colleagues include health care cost and health care utilization outcomes. The written reports of these findings are in progress.

**A6.** Reid, W. and A. Fortune (in press). Empirical foundations for practice guidelines in current social work knowledge. In A. Rosen and E. Proctor (eds.), *Developing practice guidelines for social work interventions: Issues, methods, and research agenda*. New York: Columbia University Press.

In this book chapter, the authors report the results of a literature review of 107 empirically tested social work interventions appearing in print from 1990 to 1999. For inclusion in the review, the interventions tested needed to involve direct practice with client systems (individuals, families, groups) or caregivers. In their review, the authors coded items related to the reproducibility of the intervention (availability of practice guidelines), effectiveness (reporting of positive and statistically significant outcomes), program characteristics, intervention characteristics, evaluation designs, and outcomes. The majority of the programs reviewed reported positive results. Interestingly, developers of the program or the project investigators conducted 90 percent of the programs. Virtually, no replications were conducted by outside investigators. The authors suggest that investigator bias could inflate the positive outcomes reported because no independent evaluations of the programs were conducted. Gorey (see **I, A3**) and Gremier and Gorey (see **I, A4**) have previously discussed this problem. This study specifically identified social work interventions in aging. The authors identified 10 programs (5%) in the sample that were developed for clinical social work with an aging population. Although cost outcomes were not specifically addressed,

several of the programs by Toseland and colleagues include health care costs and health care utilization outcomes. The reports of these findings are in progress.

**A7.** Rosen, A., E. Proctor, et al. (1999). "Social work research and the quest for effective practice." *Social Work Research*, 23(1): 4- 15.

This article discusses the results of a literature review of 863 articles from 13 social work journals that fit the criteria for the research articles identified by the authors. The purpose of the review was to assess the contribution of social work publications in the development of evidence based interventions. In their review, the authors examined the following areas of the research articles: 1) knowledge purpose (descriptive, explanatory, control), 2) replicability of the interventions and studies presented, 3) the specificity of the outcomes' measurement, and 4) the role of the outcomes. Very few of the articles reviewed were found to report research on interventions. Of those that did report research on interventions, even fewer used designs that would enable replication of the interventions or the research. The authors highlight the importance of collaboration between social work practitioners and researchers to advance our knowledge of evidence based social work interventions and to move forward the research agenda of social work practice so that we are informing the development and implementation of interventions based in empirical evidence.

### **B. Psychosocial Interventions**

**B1.** Applegate, W., R. Deyo, et al. (1991). "Geriatric evaluation and management: Current status and future research directions." *Journal of the American Geriatrics Society*, (Supplement) 39: 2S - 7S.

This article provides the reader with a review of randomized controlled trials (RCTs) of Geriatric Management and Evaluation (GEM) programs conducted in the 1980's. The author also provides the reader with recommendations for future research. The RCTs included were: 2 GEM inpatient unit RCTs; 2 inpatient GEM consultation team RCTs; 3 outpatient GEM RCTs; and 2 home-based GEM RCTs. The measures included to evaluate the outcomes of these GEM models included patient mortality, physical function and mental status as well as nursing home placement and hospitalization rates. Overall GEM interventions have a positive impact on mortality, rates of hospitalization and institutionalization and physical function. Future studies should: clarify the selection of participants, the structure of the intervention provided, and the successful elements of the interventions for replication. The authors recommend that future studies examine the cost of outpatient GEM, and the cost-effectiveness of the inpatient GEM unit for Medicare purposes. They argue that this information will be valuable for community providers and payers. This argument supports the need for the social work profession to demonstrate the efficacy and cost-effectiveness of social work practice in order to convince Medicare and other payers to reimburse for these services. Social workers are not mentioned as members of the GEM team in this article, but in most VA settings they are integral members of GEM teams providing services to patients. Highlighting the involvement of social workers in GEM interventions is critically important to the argument for Medicare and Medicaid reimbursement of these services.

**B2.** Bourgeois, M., L. Schulz, et al. (1996). "Interventions for caregivers of patients with Alzheimer's Disease: A review and analysis of content, process, and outcomes." *International Journal of Aging and Human Development*, 43(1): 35 - 92.

This article reports the findings of an extensive literature review of the caregiver intervention literature focused on the caregivers of patients with Alzheimer's disease (AD). The literature search and review methods used for this survey of the literature are not clearly articulated. The authors reviewed the following interventions for caregivers of AD patients: support groups, individual/family counseling, respite care, skills training, and multi-component interventions. The purpose of their review was to examine what is done in these interventions, how it is done, and what caregiver characteristics may impede or help in treatment. The article provides an excellent overview of the studies in these main areas in both narrative and table formats. The authors were most interested in the intervention characteristics, the caregiver characteristics, and the desired outcomes of the interventions. Cost outcomes were neither mentioned nor discussed. However, in the tables a few studies included measures that would be considered cost outcomes (i.e., nursing home placement, number of hospitalizations). Based on their review of the literature, the authors conclude that there is no clear understanding of the duration and intensity of treatment that is necessary for these interventions to be successful. Furthermore, the authors concluded that the linkage between the measures and the outcomes in the studies is unrealistic and/or inappropriate. Lastly, most empirical studies do not clearly state a theoretical rationale for the intervention used.

**B3.** Bower, P., N. Rowland, et al. (2002). Effectiveness and cost effectiveness of counselling in primary care (Cochrane Library). The Cochrane Library. Oxford, Update Software, Inc.

The objective of this article was to assess the effectiveness and cost effectiveness of counseling in primary care by reviewing seven randomized controlled trials (RCTs) described in eleven separate publications. All RCTs were conducted in the United Kingdom. The included studies compared intervention groups with usual care groups and used a British Association of Clinical Psychology (BACP) accreditation level non-directive and/or psychotherapeutic counseling strategy in a primary care setting. Generally, the findings suggest greater clinical effectiveness for those in treatment when compared to those receiving usual care in the short-term. Patients' reported levels of satisfaction with counseling were high across the studies. Although four studies reported similar costs for patients in treatment and usual care, these findings should be interpreted cautiously because the studies were underpowered. The authors suggest that to date the empirical evidence to support the cost-effectiveness of counseling in primary care is limited in scope. Cost-effectiveness analysis (CEA) is recommended as the best avenue for collecting evidence with samples large enough to provide the power to demonstrate convincing effect sizes. This article provides excellent summaries of the economic analyses used in the seven RCTs reviewed.

**B4.** Knight, B., S. Lutzky, et al. (1993). "A meta-analytic review of interventions for caregiver distress: Recommendations for future research." *The Gerontologist*, 33(2): 240 - 248.

In this review, the authors discuss a meta-analysis of 20 articles published in peer reviewed journals from 1980 to 1990. The articles focused on interventions for caregivers of the frail elderly. Studies were included in the meta-analysis if: 1) they measured caregiver distress, and 2) a comparison group who did not receive treatment was included in the research design. Most studies

utilized a quasi-experimental design. Effect size, which was defined as “the difference between the change in the intervention group and the change in the comparison group divided by the standard deviation (p. 241),” was calculated for each study. Taken together, the studies suggest that individual psychosocial interventions and respite programs are moderately effective while group interventions are less effective but still have a positive impact. Excellent tables summarizing the studies are included in the article.

**B5.** Rubin, A. (1992). "Is case management effective for people with serious mental illness? A research review." *Health & Social Work, 17*(2): 138-150.

The purpose of this literature review was to examine outcome studies of case management interventions for clients with mental illness. The author reviewed eight outcomes studies published in the 1980's. The methods used for the literature review and the selection of outcomes studies for the review was not described. In a table and narrative, the author focused on the description of the case management intervention used, the research methodologies, and the client outcomes that were reported. Important to note is the fact that five of the eight studies reviewed included hospitalization rate as a cost/utilization outcome. The author concludes that the empirical evidence to date does not provide conclusive evidence that case management intervention for clients with mental illness works. Of the five studies include hospitalization rate as a measure, two reported no reduction in hospitalization and three reported a reduction in hospitalizations. Problems with the outcomes studies included: a lack of consistent definition of case management, and inconsistent outcomes across studies. Although the interventions examined here were not specifically described as social work practice models, this article was published in *Health & Social Work*.

**B6.** Sobel, D. (1995). Rethinking medicine: Improving health outcomes with cost-effective psychosocial interventions. *Psychosomatic Medicine, 57*: 234 – 244.

In this article, the author makes the case for addressing the psychosocial determinants of health by providing cost-effective psychosocial interventions that address the psychosocial needs of patients as well as helping them to adjust to illness. Using available empirical evidence, the author argues that addressing the psychosocial needs of patients not only improves their health but is also cost-effective. Although the author talks about psychosocial interventions generally and does not specifically mention social work, this article provides an excellent argument for the inclusion of, and reimbursement for social work services in health care settings.

**B7.** Solomon, P. (1992). "The efficacy of case management services for severely mentally disabled clients." *Community Mental Health Journal, 28*(3): 163-180.

A comprehensive review of published and unpublished research studies of case management for severely mentally disabled adults was undertaken. This yielded 20 studies of four models of case management: (1) Full Support, (2) Personal Strengths, (3) Rehabilitation, and (4) Expanded Broker Models. This article reviews these models, the research studies, the outcomes of these studies, and provides the reader with conclusions that can be drawn from these findings regarding the efficacy of case management services for severely mentally disabled adults. Future directions for research in this area are recommended.

**B8.** Stuck, A., A. Siu, et al. (1993). "Comprehensive geriatric assessment: A meta-analysis of controlled trials." *The Lancet*, 342: 1032 - 1036.

This article reports the results of a meta-analysis of randomized controlled trials (RCTs) focused on GEM interventions. Using Medline, the authors identified 28 RCTs evaluating GEM (studies were from the USA and abroad) that fit the criteria they identified for inclusion. The original investigators were sent questionnaires asking for data unavailable in published reports to include in a reanalysis of the data for each study. The authors examined outcomes using the following measures: physical function, mortality, survival, hospital admissions, and living at home. Cumulatively, the studies examined suggest that GEM increased physical function and decreased hospital admissions by 12 percent. Although the connection was not made to cost savings within the context of this meta-analysis, a decrease in hospital admissions suggests that GEM is cost-effective. In most GEM models social workers are members of the interdisciplinary team, but this is not evident in most published articles of this intervention model. The findings also suggest that GEM has no major impact on nursing home placement rates or mortality rates.

**B9.** Toseland, R. and P. McCallion (1997). "Trends in caregiving intervention research." *Social Work Research*, 21(3): 154 - 164.

In this article, the authors review the literature focused on caregiving research in the latter half of the 20th century to identify the trends in this research as well as areas for continued research into the 21st century. The number of articles/studies reviewed and the methods used for their selection were not described. In the review the following aspects of the interventions were examined: the aims of the caregiver intervention, the content of the caregiver intervention, the research methodology used, and the outcomes reported for the interventions. The authors conclude that the research to date suggests that most interventions have a positive and moderate impact on psychosocial well-being (i.e., caregiver burden, depression, & quality of life). Two articles included in this annotated bibliography are specifically mentioned as including cost outcomes that suggest some interventions can have a significant impact in this area (see **II, A9**; see **II, A7**).

**B10.** Trabucchi, M. (1999). "An economic perspective on Alzheimer's disease." *Journal of Geriatric Psychiatry and Neurology*, 12: 29-38.

This article is a review of the literature focused on economic studies of Alzheimer's disease (AD). As such, it is an excellent article because it provides us with an example of how to evaluate costs and the pitfalls to avoid in economic analyses of interventions. The number of articles reviewed and method for selection is not described. Both pharmacological and psychosocial interventions for AD were included in the survey of the literature. Social work interventions are not specifically mentioned, but one article of psychosocial interventions with family members included in this annotated bibliography is identified as a study that demonstrates cost outcomes (see **II, A7**). The author concludes that cost-of-illness studies are difficult to compare due to differences in the way costs are calculated across studies. He cautions researchers against excluding the indirect costs of interventions when calculating the total costs because the cost savings reported may be inflated if indirect costs include a shifting of costs. For example, if a person avoids nursing home placement (a direct cost) as a result of intervention, the costs may just shift to an unpaid caregiver in the home (indirect cost). The lost productivity of the caregiver is an indirect cost that should be

accounted for. This article includes an excellent table listing all the direct and indirect cost variables one should consider for inclusion in economic analyses of cost-of-illness studies, which could also be used for economic analyses of social work interventions.

## II. OUTCOME STUDIES OF SOCIAL WORK PRACTICE IN AGING

### A. Caregiving

**A1.** Chase Goodman, C. and J. Pynoos (1990). "A model telephone information and support program for caregivers of Alzheimer's patients." *The Gerontologist*, 30 (3): 399 - 404.

This article reports on the evaluation of a model telephone network program (Care-Line) for caregivers of Alzheimer's disease (AD) patients. The program consists of two components: 1) peer networks over the telephone, which consisted of four or five caregivers, each making weekly calls to each other over a three-month period, and 2) an informational lecture series covering topics related to AD education and care accessed through the use of conference calling technology. The evaluation examined the connection between professionally initiated peer networks and naturally existing social supports, the differential impacts of these on program components, and the impact of the program over time. At three months caregivers in the treatment group had reduced psychological distress, and increased support satisfaction and perceived social support. These findings, however, were not sustained over time. These measures leveled off or declined during the second three months. Additionally, caregiver burden and social conflict increased during the second three months.

**A2.** Dziegielewski, S. (1991). "Social group work with the family members of elderly nursing home residents with dementia: A controlled evaluation." *Research on Social Work Practice*, 1(4): 358 - 370.

The study explored the effects of three current social work treatments (education, support, and combination of both) to improve the relationship between family members and their relatives who have been diagnosed with dementia. Interventions were examined in a pretest-posttest control group experimental design. The interventions provided for family members were an educational approach, a supportive approach, and a combined approach. The main outcome variables were relationship satisfaction, which was measured by a modified version of the Child's Attitude Toward Mother (CAM) and Father Scale (CAF). Knowledge to establish whether relationship problems were affected by what a family member knew about the condition of dementia was measured using the Educational Acquisition Questionnaire (EDQ), an author designed questionnaire. The Record of Independent Living (RIL) was used to determine the degree of client functional independence. The treatments in order of effectiveness were education, combination of education and support, and support. The author concludes that professional social workers are needed in nursing home settings, as untrained professionals and/or volunteers cannot provide the interventions and treatment that they provide. This is important evidence to support the continued Medicare reimbursement of social work services that are provided in nursing homes.

**A3.** Ferris, S., G. Steinberg, et al. (1987). "Institutionalization of Alzheimer's Disease patients: Reducing precipitating factors through family counseling." *Home Health Care Services Quarterly*, 8(1): 23 - 51.

This study examined the effectiveness of a social work intervention that included individual counseling, home visits, and caregiver support groups in prolonging the need for nursing home placement for Alzheimer's disease (AD) patients. In Phase 1 of the study in-depth qualitative interviews were conducted with 109 caregivers of AD patients who were placed in nursing homes. These interviews were used to identify precipitating factors that led to the decision to place the family member in a nursing home. In Phase 2 of the study, 41 family caregivers who were seriously considering placement for their family members diagnosed with AD participated in the multi-component intervention. There was no comparison group in the study. At baseline and six months following the completion of the intervention, the caregivers answered a family questionnaire and a counseling evaluation form. At baseline, the cognitive status of the patient was measured using the Global Deterioration Scale and the Brief Cognitive Rating Scale. The AD patients already placed in nursing homes as well as the AD patients with caregivers considering nursing home placement all had moderate to severe cognitive impairment. At the six-month follow-up only one placement by family members had occurred and the factors precipitating nursing home placement were consistently reduced.

**A4.** Gallagher-Thompson, D., S. Lovett, et al. (2000). "Impact of psychoeducational interventions on distressed family caregivers." *Journal of Clinical Geropsychology*, 6(2): 91 - 110.

This study compared the effectiveness of two active interventions to a waiting-list control condition to reduce depression and caregiver burden and increase use of adaptive coping strategies in family caregivers of physically and/or cognitively impaired older adults. The sample of 161 family caregivers was randomly assigned to one of three groups (Increasing Life Satisfaction Class, Increasing Problem-Solving Skills Class, or Wait List/Minimal Contact Control group). Outcomes variables included: (1) Depression, which were measured using the Schedule for Affective Disorders and Schizophrenia (SADS); (2) coping, which was measured using the Indices of Coping (IC); (3) caregiver burden, which was measured using the Caregiver Task Checklist (CTCL); and, (4) perceived stress, which was measured using the Perceived Stress Scale. The results suggested that caregivers experienced: (1) a decrease in depression; (2) an increase in coping strategies; and, (3) decreased levels of subjective caregiver burden. Change in coping strategies and subjective level of burden also differed by group, with participants in the intervention conditions reporting more frequent use of cognitive or behavioral coping strategies, and less subjective burden, from pre-to post-intervention. There was no change in either avoidant coping or perceived stress over time. The results show that interventions programs targeted to improve specific coping skills and psychological symptoms can have a significant impact on caregivers' distress. While cost outcomes were not discussed in this article, interventions may help to delay nursing home placement, which in turn may have a positive monetary impact on society. Data are presented that suggest that relatively brief and low-cost interventions focused on teaching caregivers specific skills to improve their everyday coping are of at least moderate value to participants.

**A5.** Goodman, C. (1990). "Evaluation of a model self-help telephone program: Impact on natural networks." *Health & Social Work, 35*(6): 556 - 562.

Complete abstract of the study is available in **II, A1**.

**A6.** Haley, W., L. Brown, et al. (1987). "Experimental evaluation of the effectiveness of group intervention for dementia caregivers." *The Gerontologist, 27*(3): 376 - 382.

The study evaluated the effectiveness of group intervention for caregivers of elderly dementia patients. Family caregivers of elderly community-dwelling dementia patients were randomly assigned to one of two types of support groups (a supportive group and a group with both supportive and stress-management components). Participants completed pre-group, post-group, and follow-up assessments. A waiting list condition was also used. Outcome variables included: (1) depression, which was measured using the Beck Depression Inventory (BDI); (2) life satisfaction, which was measured using the Life Satisfaction Index-Z (LSIZ); (3) social support, which was measured using the Elderly-Caregiver Family Relationship (ECR) and Health and Daily Living Form (HDLF); and, (4) coping, which was measured using the HDLF. The results indicated that although caregivers rated the groups as quite helpful, group participation did not lead to improvements on objective measures of depression, life satisfaction, social support, or coping variables. The authors also consider the methodological issues of assessing the efficacy of caregiver groups as well as clinical implications of the findings.

**A7.** Mittelman, M., S. Ferris, et al. (1993). "An intervention that delays institutionalization of Alzheimer's disease patients: treatment of spouse-caregivers." *The Gerontologist, 33*(6): 730 - 740.

This article reported on the effectiveness of multi-component caregiver support services in preventing nursing home placement at one year follow up from the completion of the study. Spouse caregivers of patients with Alzheimer's disease (AD) and AD patients were randomly assigned to either a treatment group (individual and family counseling, support group participation, and consultation) or control group (only routine support). At the one year follow-up, the treatment group care recipients had fewer nursing home placements than the control group care recipients. The results suggest that comprehensive counseling integrated into treatment reduced the socioeconomic impact of AD. The findings are monetarily significant because the intervention resulted in a cost savings to the community and the health care system by reducing nursing home placements. They also support the efficacy of social work and its interventions in improving the quality of life for older adults.

**A8.** Montgomery, R. and E. Borgatta (1989). "The effects of alternative support strategies on family caregiving." *The Gerontologist, 29*(4): 457 - 464.

This study was designed to determine whether educational or respite services, alone or in combination, would affect the level of caregiver burden or the extent of nursing home placement. Family units (N=541) of impaired elderly persons and caregivers were randomly assigned to a control group or one of five treatment groups eligible for a variety of respite or educational services. The five treatments were family support programs consisting of various combinations of education and respite services. Outcome variables were: (1) caregiver burden, which was measured

by using a 5-Point Likert type scale developed by the authors; and, (2) length of stay (LOS), which was measured by asking caregivers whether a care recipient had been placed in a nursing home and his/her date of placement. This LOS question was asked at each measurement time to determine change. Differences in caregiver status were also explored. Results revealed that after twelve months of service eligibility, the caregivers of elderly persons remaining in the community reported lower levels of subjective burden. These findings suggest that services may delay nursing home placement among families with adult child caregivers, but encouraged placement by spouse caregivers.

**A9.** Peak, T., R. Toseland, et al. (1995). "The impact of a spouse-caregiver support group on care recipient health care costs." *Journal of Aging and Health*, 7(3): 427 - 449.

This study examined the effectiveness of a multi-component group program for spouses of frail aging veterans that included support, education, problem solving, and stress reduction. Outcome variables included: (1) caregiver's physical health status, which was measured using the Adult Health and Daily Living Form (HDL); (2) care receiver's health status and functional status, which were measured using the Patient Assessment Tool for Home Care (PATH), Home Care Classification Project Form (RPI), Activities of Daily Living (ADLs), and Independent Activities of Daily Living (IADL); (3) caregiver burden, which was measured using the Montgomery and Borgatta Burden Scale (MBBS); (4) caregiver depression, which was measured using the Beck Depression Inventory and Geriatric Depressions Scale; (5) caregiver anxiety, which was measured using the State-Trait Anxiety Inventory (STAI); (6) caregiver perceived self-efficacy, which was measured using a 3-Point Index Developed by Duncan and Liker (1981); and, (7) caregiver coping skills, which were measured using the Health and Daily Living Form (HDL) and Index Coping Responses (ICR). The cost effectiveness of the interventions was also explored. The variables and outcomes for cost, however, were not provided for in detail. The findings showed that poor health produced significant outpatient and inpatient costs and that the interventions showed a total cost savings for the care recipients. The results of the present study indicate that those in the group programs (intervention groups) showed significant increases in the use of active behavioral coping strategies, knowledge of community resources, perceived independence in the marital relationship, and personal changes in the caregiving relationship. They also experienced significant decreases in subjective burden and the stress and severity of caregiving problems. The results of the study suggest that additional studies of new and improved psychosocial intervention programs are needed.

**A10.** Toseland, R. (1990). "Long-term effectiveness of peer-led and professionally led support groups for caregivers." *Social Service Review* (June): 308 - 327.

This article discusses a study that evaluated the effectiveness of peer-led and professionally led support groups. This randomized controlled trial (RCT) included a sample of 116 adult daughter/daughter-in-law caregivers of the frail elderly. Individuals were randomized to a peer-led support group, a professionally-led support group, or usual care (no support group). The following measures were used to compare the effectiveness of the support groups with usual care and with each other: Caregivers' perceptions of their own health, Zarit Burden Inventory, Problems with Caregiving Scale, Bradburn Affect Balance Scale, Pressing Problems Change Index, and Social Support Networks. The findings revealed that there were no significant differences between the

two types of support groups. However, when compared to the usual care group the members in both treatment groups had significant gains in available support networks at end of the intervention and the one-year follow-up. Also, participants' feelings of guilt, worry, and self-blame decreased in the treatment groups.

**A11.** Toseland, R., C. Blanchard, et al. (1995). "A problem solving intervention for caregivers of cancer patients." *Social Science & Medicine*, 40 (4): 517 - 528.

This randomized controlled trial (RCT) evaluated the effectiveness of an individual social work counseling program for spouses of individuals diagnosed with cancer. The sample was comprised of 40 male and 40 female spouses of cancer patients. They were randomized into treatment or usual care. Those in the treatment group received the 4 - 6 session intervention. The following measures were used to evaluate the effectiveness of the intervention: the Center for Epidemiological Studies Depression Scale, the State-trait Anxiety Inventory, the Dyadic Adjustment Scale, the Medical Outcomes Studies SF-20, a 5-item scale adapted from Social Functioning Subscale of the Health & Daily Living Form, the Zarit Burden Inventory, the Help Seeking Coping Index, the Index of Coping Responses, the Pressing Problems Inventory, and the Personal Change Scale. No significant changes were found for the outcome variables.

**A12.** Toseland, R., M. Labrecque, et al. (1992). "An evaluation of a group program for spouses of frail elderly veterans." *The Gerontologist* 32(3): 382 - 390.

Complete abstract of study is available in **II, A9**.

**A13.** Toseland, R., P. McCallion, et al. (2001). "Health education groups for caregivers in an HMO." *Journal of Clinical Psychology*, 57(4): 551 - 570.

This study evaluated the short-term effectiveness of a Health Education Group (HEP) intervention program for spouses of frail older adults when compared to the usual care (UC) offered to spouses of frail older persons in a staff model health maintenance organization. HEP is a multi-component group program offered in eight weekly, two-hour group sessions, and ten monthly, two-hour follow-up group sessions. It includes emotion-focused and problem-focused coping strategies, education, and support. One-hundred and five spouses were recruited and randomly assigned to HEP (n=58) or UC (n=47). Spouse caregivers and care recipients were assessed within two weeks of intervention and within two weeks after the completion of the eight weekly group meetings. Outcomes variables included: (1) caregiver and care recipient psychosocial well-being, which was measured using the General Health Questionnaire (GHQ); (2) caregiver and care recipient social support, which was measured using the Social Provisions Scale (SPS); (3) caregiver and care recipients perceived health, which was measured using the Medical Outcome Study Short-Form Health Survey (SF-36); (4) caregiver burden, which was measured using the Montgomery-Borgatta Burden Scale (MBBS); (5) caregiver health and social service problems, which was measured using the Pressing Problems Index (PPI); (6) caregiver community service knowledge, which was measured using the Knowledge and Use of Community Services Scale (CSS); and, (7) caregiver perceived self appraisal, which was measured using the Self-Appraisal of Change Scale (SAC). The results suggested that HEP was more effective than UC in reducing depression, maintaining social integration, increasing effectiveness in solving pressing

problems, increasing knowledge of community services and how to access them, changing caregivers' feelings of competence, and the way caregivers respond to the caregiving situation. No significant differences, however, were found between care recipients in the two arms of the study on any of the outcome measures.

**A12.** Toseland, R. and G. Smith (1990). "Effectiveness of individual counseling by professional and peer helpers for family caregivers of the elderly." *Psychology & Aging*, 5(2): 256 - 263.

The study compared individual and group interventions in supporting family caregivers of frail older people. Outcome variables included: (1) caregiver emotional response to caregiving, which was measured using the Bradburn Affect Balance Scale (BABS) and Zarit Burden Interview (ZBI); (2) caregiver psychiatric symptomatology, which was measured using the Brief Symptom Inventory (BSI), Global Severity Index (GSI), Positive Symptom Total (PST), and Positive Symptom Distress Index (PSDI); (3) caregiver social support, which was measured using the Community Resource Scale; (4) caregiver social support, which was measured using the Community Resource Scale (CRS); (5) caregiver relationship with care receiver, which was measured using the Vanderbilt Psychotherapy Process Scale; and, (6) project satisfaction, which was measured using a 5-Point Likert Type scale. An individual intervention produced more positive effects of caregiver psychological functioning and well being than did a group intervention, whereas a group intervention produced greater improvements in caregivers' social supports. Participants in both interventions experienced significant improvements in coping with caregiving stress. Process differences are proposed as an explanation for the differential effects of the two intervention modalities. Psychological issues respond best to individual intervention, and social support issues respond best to group intervention. Therefore, the types of problems and issues specific to an individual caregiver might determine the most appropriate type of intervention.

**A13.** Toseland, R., C. Rossiter, et al. (1990). "Comparative effectiveness of individual and group interventions to support family caregivers." *Social Work*, (May): 209 - 217.

Complete abstract of the study is available in **II, A12**.

### **B. Health**

**B1.** Anker-Unrever, L. and F. E. Netting (1995). "Coordinated care partnership: Case management with physician practices." *Journal of Case Management*, 4(1): 3 - 8.

This article describes the first year of a demonstration project involving the implementation of the Coordinated Care Project (CCP) funded by the John A. Hartford Foundation. This study utilized a convenience sample of patients 65 to 80 (at time of entry) receiving care in one of three CCP participating physician practices. In order to qualify for screening, patients had to have one of the following diagnoses: congestive heart failure (CHF), cardiopulmonary disease (COPD), Cerebral Vascular Accident (CVA), hip fracture, or Diabetes. Of the 270 patients referred to CCP, 130 met the screening criteria for inclusion in the CCP intervention, a case management model of care coordination implemented by a nurse and 2 MSW-level social workers. Screening measures included: self reported activities of daily living (ADLs) status, self-reported risk of falls, appointments with other physicians, recent weight loss/gain, use of ambulance, emergency

department (ED) and urgent care clinic visits, number of medications taken this year versus last year, and the completion of advance directives, frequency and quality of contact with family members, presence of sleep disorders, and indicators of depression. Full outcomes are not included because this article was focused on a full description of the intervention after the first year of implementation.

**B2.** Boulton, C., J. Rassen, et al. (2000). "The effect of case management on the costs of health care for enrollees in Medicare Plus Choice plans: A randomized trial." *Journal of the American Geriatrics Society*, 48: 996 - 1001.

This article reported the results of a study that examined the effects of case management on an older population's health care costs. The study provided no evidence that social work oriented case management reduces the use or the cost of health care services. The intervention was cost neutral. The problem with this study was that the intervention was only implemented with 111 of the 3480 patients in the treatment group and similar individuals in the control group were not identified to make a true comparison. Article points out some of the difficulties with cost data in studies. In this study, 90 percent of the participants were in Medicare full risk contract HMOs. HMO payment records for health care costs, such as ER visits, hospitals, specialist MDs, outpatient facilities, SNF, Hospice, medical supply companies, labs, and the case management program were used as cost data.

**B3.** Claiborne, N. (2003). Care coordination model for meeting the biopsychosocial needs of stroke patients. Albany, NY.

The two manuscripts (in progress) from this study discuss the care coordination model, findings and implications of the care coordination model. The sample included 28 CVA patients' ages 43 - 86 recently discharged from one inpatient physical rehabilitation program in Upstate NY. Once screened in as eligible, patients were randomly assigned to the treatment or usual care group. Individuals with cognitive impairment and aphasia were excluded from the study. Baseline and post-test measures included the SF-36, the Functional Independence Measure (FIM), the Geriatric Depression Scale (GDS), a scorable psychosocial assessment and a service needs assessment designed specifically for this study, and self-reported medical adherence and health care utilization. The full results of the study will be reported in the two manuscripts out of this study. The care coordination model was implemented by two experienced MSW-level medical social workers. Preliminary results suggest that individuals in the treatment condition had increased outpatient medical visits and medical adherence when compared to the usual care group. They also had decreased ED visits and inpatient admissions when compared to their UC counterparts.

**B4.** Egan, M. and G. Kadushin (1999). "The social worker in the emerging field of home care: Professional activities and ethical concerns." *Health & Social Work*, 24(1): 43 - 54.

This article reports the results of a self-administered survey developed from a review of the literature of social work services in home care agencies. The investigators wanted to explore three areas: 1) social workers' engagement in direct and indirect practice activities; 2) social workers' ratings of ethical concerns; and 3) social workers' involvement with hospital discharge planners. The surveys were mailed to all social workers in home care agencies in Wisconsin and Tennessee.

A total of 118 social workers completed and returned the surveys for a response rate of 55 percent. The findings of the study suggest that social workers perform a variety of direct patient activities, indirect patient activities, and organizational/professional activities (excellent summary table on p. 49). Social workers also reported ethical concerns related to barriers to access of services, self-determination, etc.

**B5.** Epstein, J., A. Turgeman, et al. (1998). "Preadmission psychosocial screening of older orthopedic surgery patients: Evaluation of a social work service." *Social Work in Health Care*, 27(2): 1 - 25.

This article presents the findings of a modified post-test only control group design study of a pre-admission social work screening intervention in a hospital. A total of 100 patients (43 treatment group; 57 control group) were randomly assigned. The sampling frame included all elective surgery orthopedic patients. Males aged 60 and older were included and females aged 65 and older were included. Data were collected using two instruments designed for this study: a preadmission screening form and a post-test questionnaire. All patients in the treatment group received social work services while they were in the hospital. Patients in the control group received usual care. The findings suggest the social work services did not positively impact length of stay (LOS). Individuals in treatment did not have significantly shorter LOSs than those in usual care. However, factors such as post-operative complications would not be impacted by social services. Overall, the treatment group was much more satisfied with services than the control group. Patients with limited pre-admission physical function as reported on the pre-admission screening were most likely to report that they had insufficient help at discharge.

**B6.** Lord, B. and R. Pockett (1998). "Perceptions of social work intervention with bereaved clients: Some implications for hospital social work practice." *Social Work in Health Care*, 27(1): 51 - 66.

This study focused on social work bereavement intervention in a large Australian teaching hospital. The study compared client and social work perceptions of the service provided. The study involved the completion of a series of questionnaires and client interviews over a three month period, in which clients were asked about the main outcome variable: client satisfaction with social work services. Eighty-eight percent of clients contacted indicated that they were satisfied with the social work services received. The results indicated a positive match between clients' and social workers' perceptions of the intervention and affirmed the role of social work in bereavement care. Seventy percent of the clients made recommendations regarding potential improvements for social work services. The recommendations included: 1) social workers should be present when the doctor breaks bad news; 2) additional support should be provided in how to talk to doctors; 3) social workers should be involved from the point of admission of the patients, and 4) primary social worker should remain with the family throughout the hospital stay.

**B7.** McNeill, T., D. Nicholas, et al. (1998). "Perceived outcomes of social work intervention: Beyond consumer satisfaction." *Social Work in Health Care*, 26 (3): 1 - 19.

This study identified and measured the predictive value of specific indicators of consumer's overall perception of a hospital based social work service. A questionnaire evaluating client perceptions of each component was developed and administered to 83 randomly selected

respondents. The study also gathered information about perceptions of patients/families regarding the reason for social work involvement and the corresponding outcomes measured on a goal attainment scale. The findings were positive concerning the value of social work. The results suggest that the "components" of satisfaction that were tested were relevant as they were positively and significantly associated with patients' overall rating of the social work service. An interesting finding that may have implications for practice was that only 3.7 percent of respondents saw themselves as self-referred to the social worker

**B8.** Oktay, J., D. Steinwachs, et al. (1992). "Evaluating social work discharge planning services for elderly people: Access, complexity, and outcome." *Health & Social Work, 17*(4): 290 - 298.

This article reports the results of a study designed to examine social work discharge planning using multi-component social work services. The stratified random sample of 1,100 inpatients ages 60 years to 75 plus years were admitted and discharged from one of five medium to large hospitals. Individuals who stayed less than three days or more than 30 were excluded from the study. Data about the hospital social work discharge planning were collected using telephone interviews with patients two weeks post-discharge and self-administered social work discharge planning questionnaire completed by the hospital social workers. The findings suggest that patients with post-hospital needs are most likely to receive social work services while they are in the hospital. However, few elderly patients who returned to community received social work services post-discharge. Finally, social work services appeared effective in reducing patients' unmet needs in nursing, medication, and physical therapy. Although not discussed here, this could result in decreased health care costs and utilization in the long-term.

**B9.** Ponto, J. and W. Berg (1992). "Social work services in the emergency department: A cost-benefit analysis of an extended coverage program." *Health & Social Work, 17*(1): 66 - 73.

This article examined a program that provides social work services in a general hospital's (Milwaukee, Wisconsin) emergency department (ED) on a 24-hour, seven day a week basis. The cost of these services is assessed through the output value index (a form of cost-benefit analysis in which the estimated value of the program's output is contrasted with the estimated investment of resources to maintain the program). The advantages of social work availability for the ED patients were threefold. First, comprehensive knowledge of community resources enabled the social worker to locate an immediate opening in a culturally and programmatically appropriate shelter. Second, the timeliness of the social work intervention ensured that through a narrow window of opportunity, the needed information and protection could be provided immediately. Third, the cost-effectiveness of ED social worker services is reflected in the relatively brief and economical ED intervention that moved the patient into an environment with long-term resources provided by staff experienced in specific treatment of individuals. The results suggest that the program was operated at a marginal cost to the hospital and that cost may have been outweighed by tangible and intangible program benefits.

**B10.** Rizzo, V. (2003). Social work support services for stroke patients. Unpublished Doctoral Dissertation, University at Albany, State University of New York.

This study is an attempt to better understand the influence of social support services on the inpatient physical rehabilitation outcomes of CVA patients. Specifically, the study examines: 1) the factors that predict that social work support services will be received by the individuals; and, 2) the influence of these factors, including the social work support services received, on the efficient use of rehabilitation services and total hospital charges for these individuals. The sample included 233 CVA patients admitted to an inpatient physical rehabilitation program in Upstate New York from June 1998 to December 2000. Social work support services data were collected retrospectively from medical records using a data collection tool designed specifically for this study. These data were added to an existing database that included functional severity, sociodemographic, psychological, and social information about these patients. Standardized measures included the Functional Independence Measure (FIMTM), the Geriatric depression Scale (GDS), and the Neurobehavioral Cognitive Status Examination (NCSE). The study found that the strongest predictors of the social work support services provided were age and the presence of depressive symptoms. This suggested that social workers should rapidly assess and treat older individuals, individuals with cognitive and functional impairments, and individuals with depressive symptoms. Although the effects of the social work support services on stroke outcomes were modest, the study found that these services influenced stroke outcomes. Most importantly, the study revealed that higher levels of informational social work support services were associated with lower total hospital charges.

**B11.** Rosen, J., J. Gilbert, et al. (1999). Long term follow-up of proactive social work services for high risk elderly. 127th Annual Meeting of the American Public Health Association, Chicago, IL.

In this presentation, the investigators reported the results of a five year RCT of proactive social work services for high risk elderly participating in an HMO. A total of 813 patients were enrolled in the study. At follow up 625 patients were still in the study. Patients were randomized to treatment or usual care groups. Individuals in the usual care group received usual care. Patients in the treatment group received proactive social work services. MSW-level social workers became members of health care teams that included physicians and nurses. They coordinated care for these patients with the aim of decreasing ED visits, inpatient/outpatient costs, utilization patterns, and total medical costs. The results revealed that those in the treatment group had few ED visits and hospitalizations than those in usual care. Therefore, overall medical costs decreased.

### **C. Geriatric Evaluation and Management (GEM)**

**C1.** Boulton, C., L. Boulton, et al. (1994). "A controlled trial of outpatient geriatric evaluation and management." *Journal of the American Geriatrics Society*, 42: 465 - 470.

This study evaluated the effectiveness of targeted outpatient geriatric evaluation and management (GEM). One-hundred fifty-four elderly Medicaid recipients, whose probability of incurring a repeat hospital admission within 4 years and who were patients of an outpatient GEM clinic at an urban hospital, participated in the study. Of the 154, forty-three subjects received GEM (experimental) and 111 received usual care (control). Outcome measures included mortality, use of

institutional services, and satisfaction. During the program's first 17 months of follow-up, the experimental subjects had lower annual rates of mortality and emergency room use than did the controls. The experimental subjects also tended to use nursing homes, but not hospitals, at a lower rate than the controls. All of the experimental subjects rated the program as either excellent or good. All participants said that they would recommend it to others. The subjects' established primary physicians rated the GEM services as appropriate and helpful. The authors conclude that targeted outpatient GEM was associated with reduced mortality, reduced use of emergency rooms, and a trend toward reduced use of nursing homes.

**C2.** Burns, R., L. Nichols, et al. (2000). "Interdisciplinary geriatric primary care evaluation and management: Two-year outcomes." *Journal of the American Geriatrics Society*, 48: 8 - 13.

This article compared the effectiveness of long-term primary care management by an interdisciplinary geriatric team with usual ambulatory care. In a two-year randomized clinical trial, at the Veterans Affairs Medical Center, Memphis, TN, 128 veterans, ages 65 years and older, were randomized to outpatient GEM or usual care (UC). Two-year follow-up analyses are based on 98 surviving individuals. Study outcomes measurements included: (1) health status, which was measured using the Global Health Perception (GHP); (2) function, which was measured using Activities of Daily Living (ADL), Instrumental Activities of Daily Living (IADL), and Perceived Global Social Activity (GSA); and, (3) quality of life (included affect, cognition, and mortality), which was measured using the Center for Epidemiological Studies-Depression (CES-D), Rand General Well-Being (GWB) scale, Perceived Global Life Satisfaction (GLS), and Folstein Mini Mental State Exam (MMSE). At two years, there were positive intervention effects for eight of the 11 outcome measures, five of which had attained significance at one year. GEM subjects, compared to UC subjects has significantly greater improvement in health perception, smaller increases in the number of clinic visits, and IADL impairments, improved social activity, greater improvements in the CES-D scores, general well-being, life satisfaction, and MMSE scores. The findings suggest that primary care approach that combines an initial interdisciplinary comprehensive assessment with long-term, interdisciplinary outpatient management may improve outcomes for targeted older adults significantly. The findings suggest further that outcomes may continue to improve over time and that the GEM care model provides an effective way to manage health care of older adults.

**C3.** Engelhardt, J., R. Toseland, et al. (1996). "The effectiveness and efficiency of outpatient geriatric evaluation and management." *Journal of the American Geriatrics Society*, 44: 847 - 856.

The effectiveness and efficiency of outpatient geriatric evaluation and management (GEM) was compared with usual outpatient primary care (UPC). One hundred sixty frail elderly outpatients were assigned randomly to GEM or UPC and assessed at baseline and at eight months on measures of health and functional status, which was measured by Activities for Daily Living (ADL), Instrumental Activities of Daily Living (IADL), an 18-Item Functional Independence Measure, a 20-Item Short Form Health Survey, and death certificates were collected in instances of death during the study. Psychological well-being was measured using the Short Portable Mental Status Questionnaire (SPMSQ), Geriatric Depression Scale (GDS), Philadelphia Geriatric Central Morale Scale-Revised (PGCMS-R), Brief Symptom Inventory (BSI), Lubben's Social Network Scale (LSNC), and the Satisfaction with Support Scale (SSC). Quality of Health and Social Care

was measured using the Quality Assurance Review (QAR), Continuity of Care Index (CCI), Patient Satisfaction Questionnaire (PSQ), Pressing Problem Index (PPI), Support Services Questionnaire (SSQ), and Financial Benefits Questionnaire (FBQ). Use of Inpatient and Outpatient Services was measured using the Non-VA Utilization Questionnaire (NVU). Cost of care was measured by aggregating each unit of service that patient received. The results indicated that GEM was significantly more effective than UPC in reducing mortality, increasing patient satisfaction, and improving quality of health care. However, it was not effective in reducing health care use or cost of such care.

**C4.** Rubin, C., M. Sizemore, et al. (1992). "The effect of geriatric evaluation and management on Medicare reimbursement in a large public hospital: A randomized clinical trial." *Journal of the American Geriatrics Society*, 40: 989 - 995.

This study compared charge and reimbursement data for services billed to Medicare between two groups of patients (one receiving comprehensive geriatric assessment and follow-up care; and the other receiving usual care). Two-hundred patients aged 70 and older, from a large medical-school affiliated public hospital, were randomly assigned to an experimental (GEM & follow-up) or control group. The major intervention of this study was implemented in outpatient long-term care. Outcome measures for this study were total charges for services billed to Medicare Parts A and B and total Medicare reimbursement. The results indicated that total charges and reimbursement were greater for the control group when compared to the treatment group but not significantly so. Subset analysis revealed significantly greater inpatient charges and Medicare reimbursement for the control patients and greater likelihood of utilization of home health care services in the experimental group. The authors concluded that GEM appears to shift utilization and Medicare expenditures from inpatient services to home health care services. There was no evidence that the experimental program resulted in increased expenditures for Medicare. In selected populations, GEM may contribute to cost containment.

**C5.** Rubin, C., M. Sizemore, et al. (1993). "A randomized, controlled trial of outpatient geriatric evaluation and management in a large public hospital." *Journal of the American Geriatrics Society*, 41: 1023 - 1028.

This article reports on the effectiveness of comprehensive geriatric assessment and follow-up care on clinical measures of mental and physical functional status and subjective well-being. Two hundred patients aged 70 and older, from a large medical-school affiliated public hospital, were randomly assigned to an experimental or control group. Main outcome measures were: 1) mental status, and 2) instrumental activities of daily living (IADLs), life satisfaction, and self perception of health status. No significant differences were found for cognitive status, ADL functioning, life satisfaction, nursing home placement, or mortality. The experimental patients reported significantly higher patient function in IADLs and more favorable self-perception of health status compared with controls. The authors conclude that outpatient comprehensive geriatric evaluation and management appears to be a useful model for providing care to medically frail elderly patients.

**C6.** Toseland, R., J. O'Donnell, et al. (1996). "Outpatient geriatric evaluation and management: Results of a randomized trial." *Medical Care*, 34(6): 624 - 640.

Complete abstract of the study is available in **II, C3**.

**C7.** Toseland, R. W., J. C. O'Donnell, et al. (1997). "Outpatient geriatric evaluation and management: is there an investment effect?" *The Gerontologist*, 37(3): 324-32.

Complete abstract of the study is available in **II, C3**.

**C8.** Williams, M., T. Williams, et al. (1987). "How does the team approach to outpatient geriatric evaluation compare with the traditional care: A report of a randomized controlled trial." *Journal of the American Geriatrics Society*, 35: 1071 - 1078.

This study reports the findings of a randomized controlled clinical trial (RCT) to evaluate the effectiveness of a team-oriented geriatric assessment approach compared to traditional care. One hundred-seventeen subjects 65 years of age and over, meeting eligibility criteria to target frail older persons with changing medical and social needs were randomly assigned to receive a comprehensive geriatric assessment by a multidisciplinary team (treatment) or by one of the panel of community internists who were reimbursed according to their usual or customary fee (usual care). Outcome variables were: (1) functional status, which was measured using Patient Assessment Forms (PAF); (2) maintaining home environment, which was measured using the Geriatric Ambulatory Consultative Service of Monroe Community Hospital (GACS); (3) institutionalizations, which were measured using the number of times patient sought admission to the hospital; and, (4) health care costs, which were measured using a costs based approach designed for Monroe County-in which estimates for the county and the hospital were calculated. Extensive analysis of baseline information failed to identify any significant differences between groups. Over the one-year follow-up period, treatment participants experienced 26 hospital admissions and used 670 hospital days compared to 23 admissions and 1113 days for the usual care patients. Annual hospital costs including hospital and nursing home care revealed an average saving of \$2189 per person for treatment subjects compared with usual care patients. This was a 25 percent reduction in costs. A small proportion of subjects accounted for this difference. No significant differences were noted in patient or caregiver satisfaction with the evaluation process, functional ability, or health status. The findings suggest that team-oriented outpatient geriatric assessment provides a promising way to deliver high quality, satisfying care to older persons without increasing health care costs.

#### **D. General**

**D1.** Babins, L., J. Dillion, et al. (1988). "The effects of validation therapy on disoriented elderly." *Activities, Adaptation & Aging*, 12(1/2): 73 - 86.

This article reports the results of a randomized controlled trial of Validation Therapy (VT). The sample included 12 institutionalized women between the ages of 80 and 91 with stage two or three disorientation as measured by the Tool for Assessing Confusion in the Elderly. Individuals in the treatment group received 22 sessions of VT while the control group received usual care. The

total length of the treatment was 11 weeks and the group met two times weekly. The following instruments were used to measure both baseline and post-test change areas: The Nurses' Observation Scale for Inpatient Evaluation, The Philadelphia Multi-level Assessment Instrument-Cognitive Domain, The Behavior Assessment Tool, and The Group Therapy Observation Tool. In all six categories of measurement, including "physically participates," "shows leadership," and "touches," the gain score for women in the VT group increased. However, the irritability scores of patients in the treatment group increased while those of patients in the usual care group scores decreased.

**D2.** Dhooper, S., S. Green, et al. (1993). "Efficacy of a group approach to reducing depression in nursing home elderly residents." *Journal of Gerontological Social Work*, 20(3/4): 87 - 100.

This study utilized a pre-test/post-test control group design to examine the impact of a social work group intervention on depression in nursing home residents. The sample consisted of 16 elderly nursing home residents experiencing mild to moderate depression. The Zung Self-Rating Depression Scale was used to measure depression at pre- and post-test. Individuals with depression were randomized into the treatment or usual care group. After completing the intervention, 75 percent of patients in the treatment group were free of depression, and none were "moderately depressed" after the completion of the intervention. This was not the case in the usual care group. The mean scores between groups (treatment; usual care) were statistically significant.

**D3.** Hussian, R. and P. Lawrence (1981). "Social reinforcement of activity and problem-solving training in the treatment of depressed institutionalized elderly patients." *Cognitive Therapy & Research*, 3(4): 57 - 69.

This randomized controlled trial (RCT) examined the effectiveness of two interventions: social reinforcement of activity and problem solving training with nursing home residents. Thirty-six nursing home residents ages 60 and older were randomized into treatment or usual care. Those in the treatment group received one of the two interventions. The following measures were used to examine the outcomes: the Beck Depression Inventory, the Hospital Adjustment Scale, the Self-rating depression scale and surveys designed for those in the treatment conditions. After 1 week of either intervention, residents in treatment had significant decreases in depression scores when compared with those in usual care. This continued through the second week of treatment. Those residents in the problem-solving training continued to have decreases at both follow-ups.

**D4.** McCallion, P., R. Toseland, et al. (1999). "An evaluation of a family visit education program." *Journal of the American Geriatrics Society*, 47: 203 - 214.

This article reported the results of a study designed to evaluate the Family Visit Education Program (FVEP), which is aimed at improving the quality of interaction between family members and nursing home residents with moderate and severe dementia. Sixty-six residents with dementia and their primary visitor were randomly assigned to FVEP (n=32) or Usual Care (UC, n=34). Residents were assessed for 1) psychological functioning, 2) depression, 3) agitated behavior, and 4) degree of positive social interaction. Nursing staff were assessed for changes in time and methods used to manage problem behaviors. Visitors were assessed for 1) dementia management skills, 2) extent of perceived caregiving hassles, and 3) visit satisfaction. Results indicated that

FVEP was effective for reducing residents' problem behaviors and for decreasing their symptoms of depression and irritability. It was also effective for improving the way family members and other visitors communicated with residents. With the exception of reducing the use of mechanical restraints, FVEP was not effective in changing nurses' management of residents' behavior problems.

**D5.** Morrow-Howell, N. and S. Becker-Kemppalsen (1998). "Evaluating an intervention for the elderly at increased risk of suicide." *Research on Social Work Practice*, 8(1): 28 - 45.

In this randomized controlled trial (RCT), the researchers examined the Link-Plus program, a social work intervention designed for elderly individuals at high risk for suicide. The study used a wait list control group/treatment group design. A total of 61 elderly individuals were randomized into the study (31 wait list control; 30 treatment group). The following instruments were used to measure the desired outcomes: (1) the Geriatric Depression Scale (GDS); (2) the OARS instrument: activities of daily living (ADL) and instrumental activities of daily living (IADL), (3) the Social Resources rating scales; (4) the Chronic Condition Checklist; (5) the Subjective Assessment of Improvement (service provider, client); and (6) the Mental Health Status Questionnaire. At four months, elderly individuals in the treatment group had decreased depressive symptoms and increased social contact when compared to the wait list group. At eight months, differences between baseline and post-test scores of unmet needs were statistically significant for the treatment group. Clients in the treatment group had fewer unmet needs than their wait list group counterparts.

**D6.** Naleppa, M. and W. Reid (1998). "Task-centered case management for the elderly: Developing a practice model." *Research on Social Work Practice*, 8(1): 63 -86.

In this study, Design and Development methodology was used to examine task-centered case management for the elderly. Ten frail elderly from a medium sized hospital participated in a task-centered case management intervention. The researchers used an Assessment Instrument, a Needs and Goals Form, a Target Problem Form, a Reassessment Form, and Audio Recordings to further develop the intervention from this pilot study. The results of the pilot suggest that there are four areas for improvement in the model: involving clients with cognitive impairment, reminiscing clients, participation of caregivers, and social worker issues.

**D7.** Toseland, T., M. Diehl, et al. (1997). "The impact of validation group therapy on nursing home residents with dementia." *The Journal of Applied Gerontology*, 16(1): 31 - 50.

This RCT was designed to evaluate the effectiveness of Validation Therapy (VT) or a Social Contact Group with nursing home residents with at least a moderate level of dementia. A total of 88 (31 validation therapy; 29 social contact group; 28 usual care) residents in 4 skilled nursing facilities were randomly assigned to VT, a Social Contact Group, or usual care. A short personal data form was used to help describe the sample and the following instruments were used to measure behavior changes during the study: Sheltered Care Environment Scale-Reality Version, the Multi-dimensional Observation Scale for Elderly Subjects, the Cohen-Mansfield Agitation Inventory, the Geriatric Indices of Positive Behavior, and the Minimum Data Set-Resident Assessment Protocol. The findings revealed that the nursing staff reported less verbal and

physically aggressive behavior for residents who received VT when compared to the social contact group and usual care.

### **III. INTERVENTIONS IN CHILD WELFARE, DUAL DIAGNOSIS, HEALTH, MENTAL HEALTH, AND SUBSTANCE ABUSE**

#### **A. Child Welfare**

**A1.** Newman, T. and H. Roberts (1997). "Assessing social work effectiveness in child care practice: The contribution of randomized controlled trials." *Child: Care, Health, and Development*, 23(4): 287 - 296.

This article is a position paper that argues for the use of randomized controlled trials (RCTs) that evaluate the effectiveness of social work interventions in child care practice. The authors make a case for evidence-based practice in this area of social work and present both the advantages and difficulties of conducting RCTs. In this discussion, however, the authors do not mention costs or cost-effectiveness as outcome measures for RCTs.

**A2.** Plotnick, R. and L. Deppman (1999). "Using benefit-cost analysis to assess child abuse prevention and intervention programs." *Child Welfare*, 78(3): 381 - 407.

This article is a position paper that argues for the use of cost-benefit analysis (CBA) in evaluations of child abuse prevention and intervention programs. The authors points out that to date evaluations of these programs have not utilized CBA as defined by economists. The article provides the reader with a good overview of CBA and how it can be applied to child abuse prevention and intervention programs. They also discuss the limitations of this evaluation method when examining child abuse programs.

#### **B. Dual Diagnosis**

**B1.** Clark, R., G. Teague, et al. (1998). "Cost-effectiveness of assertive community treatment versus standard case management for persons with co-occurring severe mental illness and substance use disorders." *Health Services Research*, 33(5): 1285 - 1308.

This article reported the results of a study that compared cost-effectiveness outcomes & quality of life outcomes of individuals receiving assertive community treatment with the same outcomes for individuals receiving standard case management. The cost variables included: Resource consumption: mental health treatment, general health care, services through the legal system, community services, administration cost of transfer payments, and informal caregiving. The economic cost per unit of each was determined. This was multiplied by the number of units consumed to get the total cost per patient. The mental health treatment costs included: analysis of service utilization data from CMHC management info systems for outpatient services, self-report of patient, hospital records, and Medicaid payments for outpatient services. The intervention when compared to usual care was not significantly different in cost-effectiveness over the three-year period. Quality of life outcomes were not significantly different either.

**B2.** Jerrell, J. and M. S. Ridgely (1997). "Dual diagnosis care for severe and persistent disorders: A comparison of three methods." *Behavioral Healthcare Tomorrow*, 6: 26-33.

This study compared 3 intervention models (12 step recovery model, behavior skills training & intensive case management) to improve quality of life, psychiatric symptoms, and alcohol and drug abuse symptoms as well as health care costs. The cost variables included: Supportive treatment services costs (case management hours, outpatient visits, medication visits, supported housing, & day treatment services). Utilization of acute and sub-acute intensive services variables included: inpatient hospitalization, skilled nursing, and residential treatment services. The 12 step and case management programs recorded over a 40 percent decrease in total societal costs, including mental health costs, criminal justice costs, medical costs, and family costs.

**B3.** Jerrell, J. and J. Wilson (1997). "Ethnic differences in the treatment of dual mental and substance disorders." *Journal of Substance Abuse Treatment*, 14(2): 133 - 140.

This study compared three intervention models (12 step recovery model, behavior skills training, & intensive case management) to improve quality of life, psychiatric symptoms, and alcohol and drug abuse symptoms as well as health care costs with particular attention to ethnic differences across treatment groups. The cost variables included: (1) supportive treatment services costs (case management hours, outpatient visits, medication visits, supported housing, day treatment services), and (2) utilization of acute and sub-acute intensive services (inpatient hospitalization, skilled nursing, & residential treatment services). Intensive and supportive mental health costs were significantly higher in the 12 step group over time. Over time the reduction in mental health services costs was greater in the 12 step group, especially for ethnic clients at 6 months. There were no differences in functioning or symptom outcomes across the three treatment groups

**B4.** McGeary, K., M. French, et al. (2000). "Service use and cost by mentally ill chemical abusers: Differences by retention in a therapeutic community." *Journal of Substance Abuse* 11(3): 265-279.

This article reports the results of a cost of service analysis that compares usual care group mental health and other services costs with the same costs for individuals in the treatment group. The intervention examined was a modified therapeutic community intervention. The researchers also examined completers and separators in the treatment group with usual care group individuals on these same variables. Cost variables included: Other service use as reported by clients, ED visits, detoxification, short-term residential treatment, day program, outpatient clinic visits, individual counseling, outpatient psychology, inpatient psychiatric, and methadone maintenance. Cost of intervention variables included: labor, supplies, contracted services, buildings and facilities costs, and equipment. At 12 months, usual care clients had much higher costs for other services (\$29,795) than separators (\$22,048), or completers (\$1,986). Individuals in the treatment group who completed also had better clinical outcomes than UC patients or separators.

### C. Health

**C1.** Challis, D., R. von Abendorff, et al. (2002). "Care management, dementia care and specialist mental health services: An evaluation." *International Journal of Geriatric Psychiatry*, 17: 315-325.

This article reported the results of a quasi-experimental design study of a care management intervention for dementia patients in the United Kingdom (UK). Individuals in the treatment group received care management while those in the UC group did not. Health care utilization and cost data were collected for 12 months. They were collected from health and social service agencies, the self-report of the older people and their families, and by looking at the cost to society as a whole. After 18 months, 33 percent of the UC group remained home and 51 percent of the treatment group remained home. Overall, the costs for the care management group were greater. However, quality of life measures were more improved when compared to the UC group. One explanation for the cost is that there were no differences in institutionalization at year one even though there were at 18 months. The findings of this study demonstrate the importance of balancing cost with value added outcomes, such as quality of life.

**C2.** Ell, K. (PI). (2003). Project SAFe Tool-kit. Funded 1997 – 2002 under CDC Cooperative Agreement U57/CCU3155111 to the Institute for the Advancement of Social Work Research, Principal Investigator, Kathleen Ell.

Project SAFe tested a social work case management program to improve cancer screening follow-up adherence for high risk, low income, minority women over a five year period. The program adapted educational counseling and access to services interventions previously identified in the empirical literature for breast cancer screening and treatment. This intervention, which is described in detail, has been used in three multiple site studies. This case management model significantly increased adherence rates. Rates improved from 6 % to 25 %. The report provided cost data for the cost of the social work intervention. This information is not generally provided in the literature, and the intervention will be easily replicable. This study is an excellent example of how social work researchers can include both cost and value added outcomes in studies in order to provide convincing evidence to policy makers and third party payers for the reimbursement of social work services. The Project SAFe Toolkit can be obtained at [www.iaswresearch.org](http://www.iaswresearch.org).

**C3.** Evans, R., Gergen, P., Mitchell, H. et al. (1999). A randomized clinical trial to reduce asthma morbidity among inner-city children: Results of the National Cooperative Inner-city Asthma study. *Journal of Pediatrics*, 135: 332 – 338.

This is the first of two articles reporting the results of the National Cooperative Inner-city Asthma study, a randomized controlled trial (RCT) of an asthma intervention program.. This article provides the reader with a detailed description of the study design, the intervention (which was implemented by social workers) and the overall results of the study. The second article (see **III, C9**) reports the cost-effectiveness outcomes for the study. The authors used cost-effectiveness analysis (CEA) methodology as outlined by the U.S. Public Health Services panel on cost-effectiveness in health and medicine. This panel laid out the principles for conducting economic evaluations. In this study the investigators used direct medical costs and morbidity measures as cost outcomes. Direct medical costs included self-reported resource use data for asthma care

including days in the hospital, intensive care unit visits, respiratory department visits, and scheduled and unscheduled clinic visits. Morbidity measures included the rate of scheduled and unscheduled clinic visits, the rate of hospitalizations, inpatient physician visits, and emergency room visits, and the number of intensive care unit visits. The cost of each measure was calculated by applying the mean Medicaid reimbursement level for each service. Intervention costs were calculated using a cost-allocation method. The fixed and variable costs for program development, implementation and maintenance were summed. These included the costs for personnel, materials and training. In the first year of the study the intervention costs were \$245 higher for the intervention group children when compared to the usual care (UC) group. There was no extra cost in the second year. When compared to the UC group, the intervention improved the outcomes for intervention group children at an average cost of \$9.20 per symptom free day gained. The intervention was cost saving for the three strata of children with the severest asthma symptoms. This is one of the most powerful examples available of a peer-reviewed article of a cost evaluation of a social work intervention.

**C4.** Hughes, S., F. Weaver, et al. (2000). "Effectiveness of team-managed home-based primary care: A randomized multi-center trial." *Journal of the American Medical Association*, 284(22): 2877 - 2885.

This article reported the findings of a randomized controlled trial (RCT) that compared usual care (UC) with a home-based primary care team model in a VA setting. The intervention had an add-on cost of \$232 per patient per month. However, the quality of life outcomes may justify the added cost because it improved caregiver satisfaction with care, caregiver burden, and reduced hospital admissions at 6 months. This did not hold at 12 months. Outcome Measures included: Patient functional status, caregiver and patient health related quality of life (HR-QOL) and satisfaction, caregiver burden, hospital readmissions and costs over 12 months, cost measures: The Veterans' Administration and private sector cost calculations are clearly described and outlined, and this article provides an excellent example of how this should be done.

**C5.** Keehn, D., C. Roglitz, et al. (1994). "Impact of social work on recidivism and non-medical complaints in the emergency department." *Social Work in Health Care*, 20(1): 65 - 75.

This article reported the results of a study to evaluate the effectiveness of social work interventions with patients who present in the emergency department (ED) between the hours of 3 p.m. and 11 p.m. during a 12 month period. The outcome measures were recidivism and non-medical complaints. Social work interventions were support oriented or proactive and included crisis intervention, psychosocial assessment, discharge planning, tangible service acquisition, family support, consultation to medical staff. The social worker completed a brief survey after each intervention. Recidivism data was collected as follows: (1) presentations at the ED for the three months prior to the start of the study, and (2) visits to the ED for the three months following the visit in which they received the intervention. There was a four percent decline in recidivism and 51 percent of all patients seen were given a referral. No cost analyses were attached to recidivism. No cost calculations of decreases in recidivism, the intervention or referrals were provided. Although ED visits were decreased, the overall costs may have increased due to other referrals, esp. on such a short term base.

**C6.** Reese, D. and M. Raymer (2003). National Hospice Social Work Survey: Summary of Results. Council on Social Work Education APM, Atlanta, GA.

This presentation reported the results of a recent Hospice study of social work services. An article out of this study is in press in the journal, *Social Work*, and is entitled, "Relationships between social work services and hospice outcomes: Results of the national Hospice social work survey". The sample consisted of 66 Hospice patients. The study included cost outcomes. These outcomes were self-reported by the people completing the surveys (i.e., self-report of administrators). Patients who had a social worker had decreased costs and used fewer medical services. The cost variables were not very specific. What costs did social work involvement influence? 1) Social work participation in intake had a significant influence on lower home health aide (HHA) costs, lower labor costs, and lower total Hospice costs. 2) Years of experience since the social work degree attained (social workers with more experience had significant influence on costs--lower average costs per patient and lower HHA costs. 3) Higher starting salary for BSW and MSW-level social workers was significantly associated with lower average per patient pain cost.

**C7.** Roderick, P., J. Low, et al. (2001). "Stroke rehabilitation after hospital discharge: A randomized trial comparing domiciliary and day-hospital care." *Age and Ageing*, 30: 303 - 310.

This study was a randomized control study that looked at the cost-effectiveness of two stroke rehabilitation programs. The new treatment was no more cost-effective than the old treatment. In fact reduced costs in new treatment for health care were offset by increased costs for social services (specifically home care occupational therapy). This article did not include a specific description of how costs were calculated. Furthermore, social work interventions were not mentioned.

**C8.** Stewart, S., S. Pearson, et al. (1998). "Effects of home-based intervention on unplanned readmissions and out-of-hospital deaths." *Journal of the American Geriatrics Society*, 46:174 - 180.

This article reported the results of a study designed to evaluate a home-based intervention. The outcome measures were unplanned readmissions and out-of-hospital deaths. The intervention was implemented by a pharmacist or nurse and included counseling before discharge from the hospital. The counseling was focused on compliance with medications, and early detection and reporting of medical deterioration. Those patients assessed as high risk were also seen post-hospitalization. The objectives of the intervention were to optimize home medication management, detect otherwise hidden problems, increase patient/caregiver vigilance for crises, and improve liaison with community-based services. Cost outcomes included: hospital admissions and outpatient appointments. Existing hospital costing systems were used to gather this information. The costs of the intervention were calculated for the group and included the salary of the nurse and pharmacist, professional services, infrastructure, and consultation with community pharmacists. Other home care costs included: 1) consultation with physicians (standard Medicare fees); 2) cost of medications; and 3) home visits by professionals. Overall, the costs of hospital-based care were lower among patients in the treatment group (\$A2190) than patients in the usual care group (\$A2680). There were no differences between the two groups in community-based costs. Important to note is the fact that patients were only followed for six months after the intervention long-term cost savings were provided.

**C9.** Sullivan, S. D., K. B. Weiss, et al. (2002). "The cost-effectiveness of an inner-city asthma intervention for children." *Journal of Allergy and Clinical Immunology*, 110(4): 576-81.

Complete abstract is available in **III, C2**.

#### **D. Mental Health**

**D1.** Bond, G. R. (1984). "An economic analysis of psychosocial rehabilitation." *Hospital and Community Psychiatry*, 35(4): 356-62.

The author examined three studies of the major monetary costs and benefits of psychosocial rehabilitation of the mentally ill. He focused on hospitalization costs, costs of community treatment, and earnings from competitive employment. In the first study, which compared the effects of psychosocial rehabilitation with those of a support group over a nine-month period, an estimated savings of \$1,880 per client was found among the clients receiving psychosocial rehabilitation. In the second study of treatment costs for 40 chronic psychiatric recidivists who were involved in an aggressive home outreach program, an estimated annual savings of \$5,000 per client was found. In the third study 101 clients were interviewed six months after they had left a psychosocial rehabilitation program. Their earnings from competitive employment were linearly related to their length of participation in the program. The author concluded that the studies offer substantial evidence for the economic advantages of psychosocial rehabilitation.

**D2.** Chiesa, M., P. Fonagy, et al. (2002). "Health service use costs by personality disorder following specialist and non-specialist treatment: A comparative study." *Journal of Personality Disorders*, 16(2): 160-73.

This study, conducted in the United Kingdom (UK) compared patterns of health service costs by three groups of people with personality disorders treated in a hospital-based program (IPP; n=48), a step down program (SDP; n=46), and general psychiatric program (GPP; n=49). The three groups of patients with personality disorder were prospectively evaluated with respect to levels of health care use, relative costs, and clinical outcomes over a two-year period. Two samples were treated with a specialist psychosocial inpatient model and a specialist psychosocial step down model, whereas the third sample received standard psychiatric care. The aim of this study was to assess whether specialist models for personality disorders achieved greater reduction in health care use-related costs and were more cost effective than standard psychiatric care. The results of this study suggest that the total service use costs at follow up when compared with intake costs resulted in significantly higher savings in SDP and IPP when compared to GPP. Cost reductions in SDP were significantly greater than in IPP.

**D3.** Dickey, B., W. Fisher, et al. (1997). "The cost and outcomes of community-based care for the seriously mentally ill." *Health Services Research*, 32 (5): 599 - 614.

This article reported the results of a study examining the cost-effectiveness of three different types of community-based mental health service systems. This cross sectional study compared the outcomes and costs of these three systems. Individuals who were randomly selected

from these three systems were interviewed about their mental health status. Cost data were abstracted retrospectively from Medicaid paid claims and Department of Health contracts. The findings revealed that systems allocating more of their budgets to community-based services had fewer hospitalizations. However, other outcomes were not significantly different across systems. Individual level cost-effectiveness analyses revealed that costs were less for individuals in systems with more community-based services available. No mention of social workers as members of the treatment teams in these settings.

**D4.** Jerrell, J. and T. Hu (1989). "Cost-effectiveness of intensive clinical and case management compared with an existing system of care." *Inquiry*, 26(Summer): 224 - 234.

This study compared treatment outcomes and the costs of an intensive clinical and case management program with those of an existing system of care for severely mentally ill clients. The authors conducted a two-year RCT. Outcome data on the amount of mental health services utilized were collected from the existing case management information system and from private facilities to compare trends in services utilizations and the cost of the services over time for each group. The results indicate that the experimental treatment program did not cost significantly more than the comparison condition, and both groups demonstrated a cost reallocation away from 24-hour and emergency care toward outpatient and case management service. The authors suggest that caution should be exercised in generalizing the results because only direct treatment costs were considered in the analysis. They further suggest that in a study of clients with more severe and persistent disabilities, it may be prudent to include more measurement of both the direct and indirect costs associated with serving the clients effectively, especially for ways that other societal costs are offset by mental health services.

### **E. Substance Abuse**

**E1.** Barnett, P. (1999). "The cost-effectiveness of substance abuse treatment." *Current Psychiatry Reports*, 1: 166 - 171.

This review of the literature focused on the cost-effectiveness of substance abuse treatment reviews what is known about the direct costs of treatment and the impact of treatment on the cost of health care and other social service programs. The author then discusses the use of cost-effectiveness analysis (CEA) methods and the cost-effectiveness ratio in evaluations of the cost-effectiveness of substance abuse treatment. He then demonstrates how these methods can be applied to substance abuse treatment in evaluation studies with examples. This is an excellent overview article of CEA even though social work interventions are not specifically mentioned.

**E3.** Fleming, M. F., M. P. Mundt, et al. (2000). "Benefit-cost analysis of brief physician advice with problem drinkers in primary care settings." *Medical Care*, 38(1): 7-18.

This paper discussed a cost-benefit analysis of a brief physician advice intervention focused on problem drinking. Patient and health care costs associated with brief advice were compared with economic benefits associated with changes in health care utilization, legal events, and motor vehicle accidents using six- and 12-month follow-up data from Project TREAT (Trial for Early

Alcohol Treatment). No significant differences between control and intervention subjects were present for baseline alcohol use, age, socioeconomic status, smoking, depression or anxiety, conduct disorders, drug use, crimes, motor vehicle accidents, or health care utilization. The total economic benefit of the brief intervention was \$423,519, composed of \$195,448 in savings in emergency department and hospital use and \$228,071 in avoided costs of crime and motor vehicle accidents. The average (per subject) benefit was \$1,151. The estimated total economic cost of the intervention was \$80,210, or \$205 per subject. The benefit-cost ratio was 5.6:1, or \$56,263 in total benefit for every \$10,000 invested. These results offer the first quantitative evidence that implementation of a brief intervention for problem drinkers can generate positive net benefit for patients, the health care system, and society.

**E4.** French, M. T. (2001). "Economic evaluation of alcohol treatment services." *Recent Developments in Alcohol*, 15: 209-28.

The objective of this paper is to summarize and critically review the most recent literature on economic evaluation of alcohol treatment services, identify information gaps, and suggest a research agenda for the future. The focus of the review is research published after 1995, although some of the earlier economic studies are also included. Research findings in the literature provide evidence for the following. First, for many alcoholics, day hospital treatment or even less intensive outpatient services are cost-effective alternatives to inpatient treatment. Second, alcoholism treatment often results in declining health care costs for alcoholics who are covered by private health insurance. Third, though the use of alcoholics anonymous (AA) as an alternative to more structured alcohol treatment services may be cost-effective, substance abuse outcomes from AA are sometimes less favorable and the risk of relapse is higher. Fourth, methods have recently been developed to estimate the dollar value of alcohol treatment outcomes such as avoided absenteeism, increased productivity, improved health, and avoided crime. Based on these findings and developments, new treatment approaches and changes in service delivery systems require a fresh perspective on the costs and benefits of alternative treatment services. The findings from economic evaluation studies must be reported in clear and non-technical terms to an audience of clinicians and politicians so that they can be used in the process of decision-making.

**E5.** Gossop, M. and J. Strang (2000). "Price, cost and value of opiate detoxification treatments. Reanalysis of data from two randomised trials." *British Journal of Psychiatry*, 177: 262-6.

This article re-examined previously published data to calculate the costs of different treatment modalities. Opiate addicts seeking in-patient treatment were randomly assigned to one of two in-patient settings in the same hospital. Initial calculations of the costs of the inpatient and outpatient detoxification programs were made on the basis of both mean and median program costs. A second comparison was made on the inpatient drug dependence unit and the general psychiatry costs and was calculated for: cost per week, cost per episode using actual mean lengths of stay, the cost per abstinent case, and the costs adjusted both for abstinence and for a less stringent criterion of clinical improvement at two-month and seven-month follow-ups. When adjustments are made for outcome, the findings suggest that the costs of a ten-day inpatient program, when adjusted for the different rates at which patients successfully complete the program, are almost identical to those of the outpatient program. Specialized treatment was twice as costly, but had better abstinence outcomes. When adjusted for outcomes costs for both programs are similar. The authors suggest

that treatment costs can be misleading are not informed by, and adjusted for, evidence of effectiveness.

**E6.** Pettinati, H. M., K. Meyers, et al. (1999). "Inpatient alcohol treatment in a private healthcare setting: which patients benefit and at what cost?" *American Journal of Addictions*, 8(3): 220-33.

This study investigated whether selected alcohol dependent patients had better outcomes with inpatient treatment or outpatient treatment. The sample included 93 inpatients and 80 outpatients with alcohol dependence that were evaluated at treatment entry to a private healthcare setting. Patients with multiple drinking-related consequences were less likely to return to significant drinking in the first three months after treatment ended if they had attended inpatient treatment versus outpatient treatment. Thus, inpatient treatment appeared to have some advantage over outpatient treatment in the early recovery period for patients with multiple drinking-related consequences. The gap between inpatient and outpatient costs was also reduced when a cost-effectiveness ratio was calculated. Treatment costs continued to remain proportionally higher with inpatient treatment when compared to outpatient treatment.

**E7.** Schinka, J. A., E. Francis, et al. (1998). "Comparative outcomes and costs of inpatient care and supportive housing for substance-dependent veterans." *Psychiatry Services*, 49(7): 946-50.

This study examined the differential effectiveness and costs of three weeks of treatment for Veteran Affairs (VA) patients with moderately severe substance dependence assigned to inpatient treatment or to a supportive housing setting. Supportive housing was defined as temporary housing that allows a patient to participate in an intensive hospital-based treatment program. The type and intensity of treatment were generally equivalent for the two groups. Patients were consecutive voluntary admissions to the substance abuse treatment program of a large metropolitan VA medical center. Patients with serious medical conditions or highly unstable psychiatric disorders were excluded. Patients in supportive housing attended the inpatient program on weekdays. They were assessed at baseline and at two-month follow-up. Baseline analyses of clinical, personality, and demographic characteristics revealed no substantive differences between the 62 patients assigned to inpatient treatment and the 36 assigned to supportive housing. The degree of treatment involvement and dropout rates did not differ between groups. Of the 55 inpatients completing treatment, 29 were known to be abstinent at follow-up, and of the 35 supportive housing patients completing treatment, 22 were abstinent. The proportion was similar for both groups (70 %). The cost of a successful treatment for the inpatient group was \$9,524. For the supportive housing group, it was \$4,291. The authors conclude that given the absence of differential treatment effects between inpatient and supportive housing settings, the use of supportive housing alternatives appears to provide an opportunity for substantial cost savings for VA patients with substance dependence disorders.

**E8.** Weisner, C., J. Mertens, et al. (2001). "Integrating primary medical care with addiction treatment: A randomized controlled trial." *Journal of the American Medical Association*, 286 (14): 1715-23.

This study examined differences in treatment outcomes and costs between integrated and independent models of medical and substance abuse care as well as the effect of integrated care in a subgroup of patients with substance abuse-related medical conditions (SAMCs). Patients were

randomly assigned to receive treatment through an integrated model, in which primary health care was included within the addiction treatment program (n = 285), or an independent treatment-as-usual model, in which primary care and substance abuse treatment were provided separately (n = 307). Both programs were group based and lasted eight weeks, with ten months of aftercare available. Outcome measures included: abstinence outcomes, treatment utilization, and costs six months after randomization. Both groups showed improvement on all drug and alcohol measures. Overall, there were no differences in total abstinence rates between the integrated care (68 %) and independent care groups (63%). For patients without SAMCs, there were also no differences in abstinence rates (integrated care, 66% vs. independent care, 73%). There was a slight but non-significant trend of higher costs for the integrated care group (\$367.96 vs \$324.09). However, patients with SAMCs (n = 341) were more likely to be abstinent in the integrated care group than the independent care group (69% vs 55%). This was true for both those with medical and psychiatric SAMCs. Patients with SAMCs had a slight but non-significant trend of higher costs in the integrated care group (\$470.81 vs \$427.95). The incremental cost-effectiveness ratio per additional abstinent patient with an SAMC in the integrated care group was \$1581. The authors conclude that individuals with SAMCs benefit from integrated medical and substance abuse treatment, and such an approach can be cost-effective. These findings are relevant given the high prevalence and cost of medical conditions among substance abuse patients, new developments in medications for addiction, and recent legislation on parity of substance abuse with other medical benefits.

**E9.** Zarkin, G. A., R. C. Lindrooth, et al. (2001). "The cost and cost-effectiveness of an enhanced intervention for people with substance abuse problems at risk for HIV." *Health Services Research*, 36(2): 335-55.

The purpose of this article was to estimate the costs, effectiveness, and cost-effectiveness of prevention interventions for out-of-treatment substance abusers at risk for HIV. This was the first cost-effectiveness study of an AIDS intervention that focuses on drug use as an outcome. The authors examined data from the North Carolina Cooperative Agreement site. All individuals in the study were given the revised NIDA standard intervention and randomly assigned to either a longer, more personalized enhanced intervention or no additional intervention. The authors estimated the cost of each intervention and, using simple means analysis and multiple regression models, estimated the incremental effectiveness of the enhanced intervention relative to the standard intervention. Finally, they computed cost-effectiveness ratios for several drug use outcomes and compared them to a "back-of-the-envelope" estimate of the benefit of reducing drug use. The estimated cost of implementing the standard intervention was \$187.52, and the additional cost of the enhanced intervention was \$124.17. Cost-effectiveness ratios ranged from \$35.68 to \$139.52 per reduced day of drug use, which was less than an estimate of the benefit per reduced drug day. Authors concluded that the additional cost of implementing the enhanced intervention is relatively small and compares favorably to a rough estimate of the benefits of reduced days of drug use. Thus, the enhanced intervention should be considered an important additional component of an AIDS prevention strategy for out-of-treatment substance abusers.